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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 14

Application Number: 09/353,592
Filing Date: July 15, 1999
Appellant(s): RIVERA ET AL.

Andres Rivera & Keith D'Alessio

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/04/01.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existance of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,928,611	Leung	07-1999

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in the prior Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung.

Leung teaches an applicator for dispensing an polymerizable and/cross-linkable material and includes a polymerization or crosslinking rate modifier (initiator) (abstract). Leung teaches that suitable materials can be 1,1-disubstituted ethylene monomers such as alpha-cyanoacrylates (column 4, lines 34-68). Leung teaches that the polymerizable and cross-linkable materials and combinations thereof (column 3, lines 60-68) such as siloxanes, silicones, polysulfides and polyphosphazenes, as well as thermoplastics and thermoplastic elastomers such as polyamides, nylons, polyethylene, polystyrene, polypropylene, fluorocarbon resins, polyurethanes, acrylate resins and polyesters (column 4, lines 11-18).

Leung teaches that the applicator container may be a syringe, a tube, a vial, a pipette (column 8, lines 20-31) or an eyedropper (column 12, lines 60-62). The rate modifier can be detergent, nonionic surfactants such as polysorbate, cationic ones such as tetrabutylammonium bromide, and a whole list of Applicant's claimed initiators which includes phase transfer catalysts (column 9, lines 42-68). Leung teaches that the material may be useful as tissue adhesives and other implantable biomedical applications (biocompatible) (column 11, lines 20-28).

Leung teaches that the container holding the polymerizable and/or crosslinkable material may comprise the rate modifier wherein the material is stored separately within the applicator container so as not to contact the rate modifier within the container. The container may be lined or coated with the rate modifier (column 10, lines 43-53).

Because Leung's teaching that the polymerizable and/or crosslinkable material should not contact the rate modifier provides the motivation to separate the material from the rate modifier, it would have been obvious to one of ordinary skill in the art to have coated the rate modifier on the surface of frangible container 400 as an alternative. The rate modifier would still be in the same space between the outer wall of the body 200 and the inner wall of the container 400, just on the outer wall of the container 400 instead of the inner wall of container 200, still separated from the polymerizable and/or crosslinkable material.

Furthermore, Leung teaches that the container may be lined or coated with the rate modifier (column 10, lines 43-55). Because the terms "lined" and "coated" are paired in the alternative, coupled with the fact that the rate modifier would still be in the same space between the inner wall of the applicator container and the outer wall of the container containing the material, in compliance with the teaching of noncontact of the rate modifier with the polymerizable and/or crosslinkable material, it would have been obvious to one of ordinary skill in the art to have coated the outer surface of the (inner) container as an alternative to lining the inner surface of the (outer) container.

Leung teaches a process of making the applicator wherein the applicator tubes (flexible tubes) are squeezed to shatter the glass ampoules (frangible vials) thereby releasing monomer material. The applicator is then inverted and the material is forced out the tip by squeezing the applicator tube (column 12, lines 16-25).

Leung teaches a process of making the applicator wherein the applicator tubes are squeezed to shatter the glass ampoules (frangible vials) thereby releasing monomer material. The applicator is then inverted and the material is forced out the tip by squeezing the applicator

tube (column 12, lines 16-25). One of ordinary skill in the art would have known that the inner glass ampoule would have to be sealed after the addition of the polymerizable and/or crosslinkable material.

Therefore it would have been obvious to one of ordinary skill in the art to have worked out the claimed steps of the process from the invention of Leung.

(11) Response to Argument

a) Applicant argues that Leung fails to teach or suggest the limitation of independent claim 1, that a rate modifier for the polymerizable or cross-linkable material is disposed on an outer surface of said inner container.

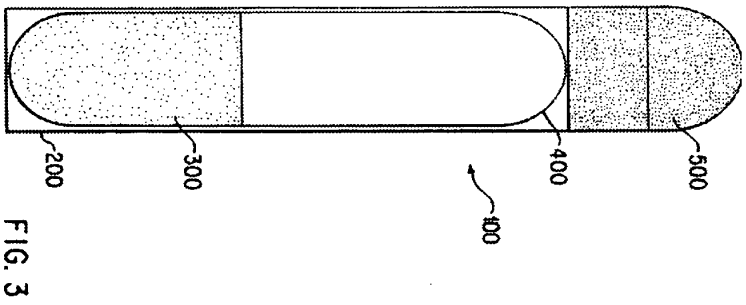

FIG. 3

The embodiment above teaches an applicator 100, which comprises a container 200 holding polymerizable and/or cross-linkable material 300 enclosed in a frangible container (vial) 400, and an applicator tip 500 containing a rate modifier (initiator) (column 7, lines 65-68 and column 8, lines 1-5). Leung teaches that the rate modifier may be coated on the inner surface of

container 200. Leung teaches that the polymerizable and/or crosslinkable material is stored separately within the container so as not to contact the rate modifier (column 10, lines 45-55).

Leung's teaching that the polymerizable and/or crosslinkable material should not contact the rate modifier provides the motivation to separate the material from the rate modifier, and to coat the rate modifier on the surface of frangible container 400 as an alternative. In the present claims, the rate modifier would still be in the same space between the outer wall of the body 200 and the inner wall of the container 400, just on the outer wall of the container 400 instead of the inner wall of container 200, still separated from the polymerizable and/or crosslinkable material.

Furthermore, Leung teaches that the container may be lined or coated with the rate modifier (column 10, lines 43-55). Because the terms "lined" and "coated" are paired in the alternative, coupled with the fact that the rate modifier would still be in the same space between the inner wall of the applicator container and the outer wall of the container containing the material, in compliance with the teaching of noncontact of the rate modifier with the polymerizable and/or crosslinkable material, the examiner maintains the position that it would have been obvious to one of ordinary skill in the art to have coated the outer surface of the (inner) container as an alternative to lining the inner surface of the (outer) container.

b) Applicant argues that the method steps of independent claim 24 which is directed to a method of making an applicator for dispensing a polymerizable or crosslinkable material, comprising sealing a polymerizable or crosslinkable material in an inner container, applying a rate modifier to an outer surface of said inner container, and disposing the inner container within

an outer container having dispensing means, are not obvious over Leung, because Leung does not teach or suggest each and every limitation of the claimed invention.

The argument has been addressed above.

c) Applicant argues that the method steps of claim 28 which depends on claim 1, which is directed to a method of applying a polymerizable or crosslinkable material to a substrate, comprising providing an applicator according to claim 1, opening said inner container to contact said material with said rate modifier, and dispensing said material from said outer container, are not obvious over Leung, because Leung does not teach or suggest specific applicator of claim 1.

Leung gives an example where the monomer (polymerizable) material are in sealed glass containers (ampoules), squeezing the applicator container (tube) to shatter the glass ampoule thus releasing the material (and contacting the rate modifier) and dispensing the material from the outer container (forcing the material out of the tip by squeezing the applicator tube) (column 12, lines 15-25). Therefore Leung does teach or suggest the method steps.

Therefore, the Examiner respectfully submits that claims 1-30 should be rejected since the scope of the claims falls within the limitation of the existing art. Thus, after considering all the evidence, it is still the examiner's position that the rejections are appropriate.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,
Sow-Fun Hon
February 4, 2002

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